RAC 104

Four Channel Volume and Tone RAC - Remote Audio Controller

FEATURES

- **Inputs: Captive screw connectors**
- **Outputs: Captive screw connectors**
- **Independent control of four audio channels**
- **Volume and tone control via front panel or RS-232**
- **Smooth, 0.5 dB volume transitions**
- **Three presets per channel for input gain, volume, bass, and treble**
- **Compatible with stereo or mono audio systems**
- **Compatible with any audio amplifier**
- **Selectable professional and consumer audio levels**
- **Front panel security lockout**
- **Rack-mountable 1U, quarter rack width metal enclosure**
- **External universal power supply included**, part # 70-055-01

DESCRIPTION

The Extron **RAC 104** Four Channel Volume and Tone Remote Audio Controller provides four channels for controlling volume, bass, and treble when placed between a switcher and an audio power amplifier. It can be configured for a variety of applications to control mono and stereo audio distribution in such environments as classrooms and meeting rooms.

The RAC 104 offers simple, intuitive operation, and features two channel selection buttons - two channels per button - with corresponding LED indicators. It provides direct access to volume, bass, and treble adjustments utilizing a front panel adjustment knob. All inputs and outputs of the RAC 104 are on captive screw connectors for balanced and unbalanced audio signals, facilitating integration-friendly installation. Part of the VersaTools® line of products, the RAC 104 is housed in a 1U, quarter rack width metal enclosure, and is rack, under-desk, and/or through-desk mountable.

SPECIFICATIONS

AUDIO

Gain	Unbalanced output: -6 dB; balanced output: 0 dB when input gain is set to 0 dB, output volume is at 100, and the input and output are set to the same level via the Line Level DIP switch
Frequency response	20 Hz to 20 kHz, ±0.05 dB
THD + Noise	0.03% @ 1 kHz at nominal level
S/N	>90 dB, balanced at maximum output
Crosstalk	<-120 dB @ 1 kHz
Stereo channel separation	>80 dB @ 1 kHz, >60 dB @ 20 kHz
CMRR	>75 dB @ 20 Hz to 20 kHz
Volume control range	-100 dB to 0 dB (volume numbers 0 through 100) in 0.5 dB steps
NOTE: Attenuation = volume number minus 100. The default is -30 dB = volume number 70.	
Bass control range	±14 dB, 100 Hz referenced to 1 kHz (0 through 14) in 2 dB steps
NOTE: Bass dB = (bass number minus 7) times 2. The default is 0 dB = bass number 7.	
Treble control range	±14 dB, 10 kHz referenced to 1 kHz (0 through 14) in 2 dB steps
NOTE: Treble dB = (treble number minus 7) times 2. The default is 0 dB = treble number 7.	

AUDIO INPUT

Number / signal type	4 channels, which can be mono or tied into stereo pairs, balanced/unbalanced
Connectors	(2) 3.5 mm captive screw connectors, 5 pole
Impedance	>18k ohms unbalanced/balanced, DC coupled
Nominal level	+4 dBu (1.23 V), -10 dBV (316 mV), switchable per group
Maximum level	+20 dBu (7.75 V), (balanced or unbalanced) at 1% THD+N
Input gain adjustment	-12 dB to +12 dB

AUDIO OUTPUT

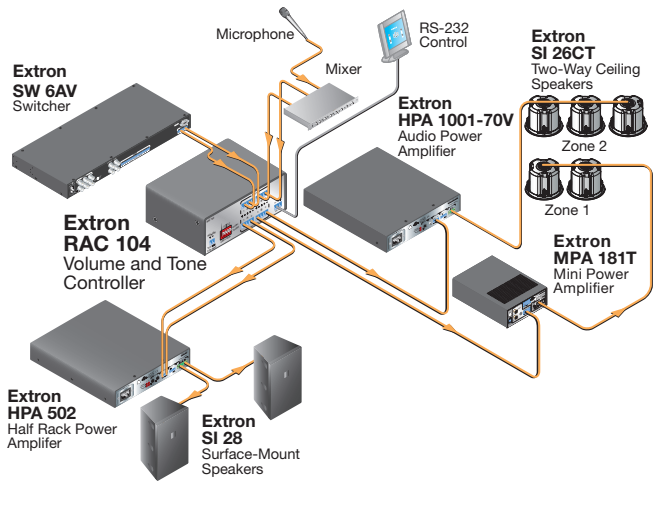
Number / signal type	4 channels, which can be mono or tied into stereo pairs, balanced/unbalanced
Connectors	(2) 3.5 mm captive screw connector, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Nominal level	+4 dBu (1.23 V), balanced; -10 dBV (316 mV), unbalanced; switchable per group
Maximum level (Hi-Z)	>+20 dBu, balanced or unbalanced at 1% THD+N
NOTE: 0 dBu = 0.775V, 0 dBV = 1V, 0 dBV ≈ 2 dBu.	

CONTROL / REMOTE – REMOTE VOLUME / TONE CONTROLLER

Serial control port	RS-232, 3.5 mm captive screw connector, 3 pole
Baud rate and protocol	9600, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	1 = TX, 2 = RX, 3 = GND
Program control	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

GENERAL

External power supply	100 VAC to 240 VAC, 50/60 Hz, external, universal; to 12 VDC, 1 A, regulated
Power input requirements	12 VDC, 0.2 A
Rack mount	Yes, with optional 1U rack shelf, part #60-190-01 or 60-604-01; or VersaTools® rack shelf, part #60-190-20 or 60-604-20. Also furniture mountable with optional brackets
Enclosure type	Metal
Enclosure dimensions	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide) 4.3 cm H x 10.9 cm W x 7.6 cm D (Depth excludes connectors and knob.)
Product / Shipping weight	0.5 lbs (0.3 kg) / 2 lbs (1 kg)


Microphone
RS-232 Control
Mixer
Extron SW 6AV Switcher
Extron HPA 1001-70V Audio Power Amplifier
Extron SI 26CT Two-Way Ceiling Speakers
Zone 2
Zone 1
Extron RAC 104 Volume and Tone Controller
Extron MPA 181T Mini Power Amplifier
Extron HPA 502 Half Rack Power Amplifier
Extron SI 28 Surface-Mount Speakers

MODEL

MODEL	VERSION DESCRIPTION	PART #
RAC 104	Volume & Tone Controller	60-561-01

OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
RSU 129	1U 9.5" Deep Universal Rack Shelf Kit	page 819	60-190-01
RSF 123	1U 3.5" Deep VersaTools® Rack Shelf Kit	page 818	60-190-20
RSB 129	1U 9.5" Deep Basic Rack Shelf	page 820	60-604-01
RSB 123	1U 3.5" Deep Basic Rack Shelf	page 818	60-604-20
PMK 300	Multi-Product Projector Mount Kit	page 813	70-374-01

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